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EXAMINER

KHAN, MEHMOOD B

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



### **DETAILED ACTION**

Note, that the method claims are considered to be tied to known machines, i.e. base stations. Since the claimed emitters in the independent claims are claimed in dependent claims as base stations. It is recommended to the applicant to change emitters and receivers in the independent claims to the base stations and mobile terminal as claimed in dependent claim 24.

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19 – 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 19 and 25-27 recite the limitation "the value". There is insufficient antecedent basis for this limitation in the claim.

Claims 19, 25-27 recite "for which the value", it is unclear whether this is referring to the pilots or information elements.

Claims 21 recites the limitation "the transfer function". There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 19-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Laroia et al. (EP 1148673 “Laroia”).**

Claim 19, Laroia discloses Method for reception of radio data transmitted between at least two emitters and one receiver (**Fig. 5: 501-503, 2 Base Stations and one Mobile Station**) wherein the method comprises:

a first step of receiving data transmitted by a multicarrier data transmission signal (**0008, received pilot signal, since this an OFDM system thus multicarrier**),

the multicarrier data transmission signal being formed from a sequence in time of symbols comprising firstly information data elements (**Fig. 3, non-shaded squares, on the time scale**), and

secondly reference elements called pilots (**Fig. 3, shaded squares**), distributed within the information data elements according to a predetermined pattern (**shaded squares in between non-shaded squares, thus within information data elements**), and for which the value during emission is known to the receiver (**0014, pilot signal contains known waveforms, thus value, so receivers can identify base stations**),

at least two of the emitters using distinct pilot patterns such that at any given moment and at any given frequency, the receiver can only receive one pilot from the emitters (**Figs. 4 and 5, 0017, pilots transmitted with different slopes and on different tones**);

a second step of identifying the emitter, which emitted the data, using a control information transmission signal (**0019-0020, using a unique slope to identify base station**), which allows notably the receiver, upon data reception, to identify the emitter that emitted them (**0019, slopes are locally different, i.e. unique thus receiver able to identify base stations**); and

a third step of determining the pilot pattern used by the identified emitter (**0020, using parameters in a programmed mobile to know the base station**).

Claim 20, Laroia discloses wherein, when the pilot pattern was generated using a generation function for which one parameter is an identifier (**0019, using a slope to identify the pilots**) of the associated emitter, the step of determining implements the generation function as a function of the identified emitter (**0020, cell phone can be programmed with known parameter, slope, to figure out base stations**).

Claim 21, Laroia discloses a step for extracting the pilots from the multicarrier data transmission signal (**0020, determining pilots**), and

a step for estimating the transfer function of a transmission channel associated with the multicarrier data transmission signal (**0028-0030, which shows solution for  $E(t)$  in the channel and a slope solver**).

Claim 22, Laroia wherein the multicarrier data transmission signal is of the OFDM type **(0019, OFDM)**.

Claim 23, Laroia discloses wherein each of the emitters uses a specific pilot pattern **(0019, unique pilots and slopes)**.

Claim 24, Laroia discloses wherein said method is implemented in a cellular radio communication network, the emitters are base stations of the network, and the receiver is a mobile terminal **(see claim 19)**.

Claim 25, as analyzed with respect to the limitations as discussed in claim 19.

Claim 26, as analyzed with respect to the limitations as discussed in claim 19.

Claim 27, as analyzed with respect to the limitations as discussed in claim 19.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the

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THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MEHMOOD B. KHAN whose telephone number is (571)272-9277. The examiner can normally be reached on Monday - Friday 8:30 am - 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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